

Amendments to the Claims:

1. (Currently Amended) An isolated amino acid sequence comprising the sequence presented as Formula I or a variant, homologue, fragment or derivative thereof, wherein said amino acid sequence has PDE activity and further wherein said amino acid sequence includes SEQ ID NO:1, SEQ ID NO:3, or SEQ ID NO:5.
2. (Currently Amended) An isolated amino acid sequence comprising the sequence presented as Formula I, wherein said amino acid sequence has PDE activity and further wherein said amino acid sequence includes SEQ ID NO:1, SEQ ID NO:3, or SEQ ID NO:5.
3. (Withdrawn) A nucleotide sequence encoding the amino acid sequence as defined in claim 1.
4. (Withdrawn) A nucleotide sequence comprising the sequence presented as SEQ ID NO:2 or SEQ ID No. 4 or SEQ ID No. 6 or a variant, homologue, fragment or derivative thereof.
5. (Withdrawn) A nucleotide sequence comprising the sequence presented as SEQ ID NO:2 or SEQ ID NO:4 or SEQ ID NO:6.
6. (Withdrawn) A nucleotide sequence that is capable of hybridising to the nucleotide sequence according to claim 3.
7. (Cancelled)
8. (Withdrawn) A vector comprising the nucleotide sequence according to claim 3.
9. (Withdrawn) A host cell into which has been incorporated the nucleotide sequence according to claim 3.

10. (Withdrawn) An assay method for identifying an agent that can affect PDE_XIV activity, the assay method comprising:

contacting the agent with a PDE_XIV protein having an amino acid sequence according to claim 1; and

measuring the activity of the PDE_XIV protein;

wherein a difference between PDE activity in the absence of the agent and PDE activity in the presence of the agent is indicative that the agent can affect PDE_XIV activity.

11. (Withdrawn) An assay method according to claim 10 wherein the assay is to screen for agents useful in the treatment of disorders found in any one or more of the putamen, the Caudate nucleus of the brain, the Occipital lobe of the brain, the heart, ovary, the pituitary gland, kidney, liver, small intestine, thymus, skeletal muscle, leukocyte regions, dorsal root ganglia, uterus, cochlea, small intestine (duodenum), astrocytoma, and appendix.

12. (Withdrawn) A process comprising the steps of:

- (a) performing the assay according to claim 10;
- (b) identifying one or more agents that do affect PDE_XIV activity; and
- (c) preparing a quantity of those one or more identified agents.

13.-15. (Cancelled)

16. (Withdrawn) A nucleotide sequence coding for a PDE_XIV, wherein the nucleotide sequence is obtainable from NCIMB 40995 or NCIMB 40996 or NCIMB 41027.

17. (Previously Amended) An isolated PDE_XIV wherein the PDE_XIV is expressable from a nucleotide sequence obtainable from NCIMB 40995 or NCIMB 40996 or NCIMB 41027.

18.-25. (Cancelled)

26. (Withdrawn) An assay method for identifying an agent that can affect PDE_XIV expression, the assay method comprising:
contacting the agent with a nucleotide sequence according to claim 3; and
measuring the expression of PDE_XIV;
wherein a difference between PDE expression in the absence of the agent and PDE expression in the presence of the agent is indicative that the agent can affect PDE_XIV expression.

27. (Withdrawn) An assay method according to claim 26 wherein the assay is to screen for agents useful in the treatment of disorders found in any one or more of the putamen, the Caudate nucleus of the brain, the Occipital lobe of the brain, the heart, ovary, the pituitary gland, kidney, liver, small intestine, thymus, skeletal muscle, leukocyte regions, dorsal root ganglia, uterus, cochlea, small intestine (duodenum), astrocytoma, and appendix.

28. (Withdrawn) A process comprising the steps of:
(a) performing the assay according to claim 26;
(b) identifying one or more agents that do affect PDE_XIV expression; and
(c) preparing a quantity of those one or more identified agents.

29. (Currently Amended) An isolated PDE_XIV protein, wherein said protein has PDE activity and shares at least 75% homology with SEQ ID NO:1, SEQ ID NO:3, or SEQ ID NO:5.

30. (Previously Added) A PDE_XIV protein of claim 29, wherein said protein shares at least 85% homology with SEQ ID NO:1, SEQ ID NO:3, or SEQ ID NO:5.

31. (Previously Added) A PDE_XIV protein of claim 29, wherein said protein shares at least 95% homology with SEQ ID NO:1, SEQ ID NO:3, or SEQ ID NO:5.

32. (Withdrawn) An isolated nucleic acid encoding a PDE_{XIV} protein, wherein said nucleic acid shares at least 75% homology with SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6.

33. (Withdrawn) A nucleic acid of claim 32, wherein said nucleic acid shares at least 85% homology with SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6.

34. (Withdrawn) A nucleic acid of claim 32, wherein said nucleic acid shares at least 95% homology with SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6.

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35. (Withdrawn) An isolated nucleic acid encoding a PDE_{XIV} protein, wherein said nucleic acid hybridizes under high stringent conditions to a nucleic acid as set forth in SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6, or hybridizes to the antisense strand thereof.

36. (Currently Amended) An isolated PDE_{XIV} protein encoded by a nucleic acid ~~of claim 35~~ that hybridizes under high stringent conditions to a nucleic acid as set forth in SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6, or hybridizes to the antisense strand thereof.
